

Detailed Data Tables: Women at Risk

Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2014, this resulted in the removal of 4,135 HIV/AIDS cases, of which 973 have died and 3,162 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location at diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual risk category for men; those cases have been reassigned to the no identified risk (NIR) category. The presumed heterosexual reported risk category was used with the intention of identifying HIV risk for women when sex with men is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of women living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual risk category. The application of the presumed heterosexual risk category to men is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate reported risks that are possible for men, including sex with other men (MSM) or IDU. The CDC reports men diagnosed with HIV/AIDS who report sex with women as their only risk factor, without corresponding partner risk or HIV status information, in the NIR category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for men in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual risk categories for women.

Table 1. People diagnosed with HIV infection by gender: Massachusetts¹, 2010–2012²

Gender:	N	%
Male	1,503	73%
Female	562	27%
Total	2,065	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/14

Table 2. People living with HIV/AIDS on December 31, 2013 by gender: Massachusetts¹

	HIV/AIDS	
Gender:	N	%
Male	13,680	71%
Female	5,485	29%
Total	19,165	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/14

Table 3. People diagnosed with HIV infection by Health Service Region (HSR)¹ and gender: Massachusetts², 2010–2012³

Health Service Region:	Male		Female		Total
	N	%	N	%	N
Boston HSR	485	78%	140	22%	625
Central HSR	114	63%	66	37%	180
Metro West HSR	234	73%	88	27%	322
Northeast HSR	252	69%	115	31%	367
Southeast HSR	201	72%	80	28%	281
Western HSR	167	72%	66	28%	233
Prisons ⁴	48	87%	7	13%	55
Mass. Total	1,503	73%	562	27%	2,065

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999

⁴ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Table 4. People living with HIV/AIDS on December 31, 2013 by Health Service Region (HSR)¹ and gender: Massachusetts²

Health Service Region	Male		Female		Total
	N	%	N	%	N
Boston HSR	4,647	76%	1,432	24%	6,079
Central HSR	1,012	62%	620	38%	1,632
Metro West HSR	2,003	72%	796	28%	2,799
Northeast HSR	2,025	67%	1,014	33%	3,039
Southeast HSR	1,854	71%	762	29%	2,616
Western HSR	1,328	64%	741	36%	2,069
Prison ³	806	87%	118	13%	924
Massachusetts Total⁴	13,680	71%	5,485	29%	19,165

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

⁴ Mass. total includes five persons living with HIV/AIDS with unknown residence at time of report.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Table 5. Ten cities/towns¹ in Massachusetts² with the highest proportion of women among HIV infection diagnoses (HIV Dx): 2010–2012³

Rank	City/Town	Number of HIV Dx among women	Percent of Total HIV Dx
1	Brockton	38	52%
2	Malden	13	52%
3	Framingham	10	50%
4	Lawrence	24	42%
5	Lowell	24	41%
6	Waltham	12	39%
7	Worcester	33	36%
8	Springfield	39	35%
9	Everett	8	33%
10	Lynn	17	33%

¹ Among cities/towns with over 20 reported HIV infection diagnoses in the years 2010–2012. Note: reflects the city/town of a person's residence at the time of report (not necessarily current residence). People diagnosed while at a correctional facility are not included.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/14

Table 6. People diagnosed with HIV infection by gender and race/ethnicity: Massachusetts¹, 2010–2012²

Race/Ethnicity:	Male		Female	
	N	%	N	%
White, non-Hispanic	674	45%	103	18%
Black, non-Hispanic	362	24%	303	54%
Hispanic/Latino	398	26%	135	24%
Asian/Pacific Islander	54	4%	12	2%
Other/Unknown	15	1%	9	2%
Total	1,503	100%	562	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/14

Table 7. People living with HIV/AIDS on December 31, 2013 by gender and race/ethnicity: Massachusetts¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White, non-Hispanic	6,927	51%	1,370	25%
Black, non-Hispanic	3,234	24%	2,511	46%
Hispanic/Latino	3,179	23%	1,486	27%
Asian/Pacific Islander	253	2%	77	1%
Other/Unknown	87	1%	41	1%
Total	13,680	100%	5,485	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Explanation of age adjusted rates

A “rate” of a disease per 100,000 population is a useful way to compare groups that have substantially different population sizes rather than relying on the raw number of cases. For example, the number of people living with HIV/AIDS on December 31, 2013 who are Hispanic/Latino, is 4,665 whereas the number of people living with HIV/AIDS who are white (non-Hispanic) is 8,297. Although the *number* of people living with HIV/AIDS who are Hispanic/Latino in Massachusetts is smaller than the number of people living with HIV/AIDS who are white (non-Hispanic), we also need to consider that there are far fewer people of Hispanic/Latino heritage living in Massachusetts than white (non-Hispanic) individuals. Hispanic/Latino individuals represent 10% of the Massachusetts population compared to white (non-Hispanic) individuals who represent 78% of the population¹. If HIV/AIDS had the same impact on the Hispanic/Latino population of the state as on the white (non-Hispanic), then there should be eight times as many cases in white (non-Hispanic) individuals, but there are less than twice as many. By calculating a rate which takes into consideration the differences in the population size, it is evident that the number of people living with HIV/AIDS for every 100,000 Hispanic/Latino individuals in Massachusetts is much higher than the rate for every 100,000 white (non-Hispanic) individuals. This is called a “crude rate” and is calculated by dividing the number of people living with HIV/AIDS by the population of interest (the total number of Hispanic/Latino individuals in Massachusetts, for example) and multiplying by 100,000. (See example 1.A below).

Example 1.A: Calculation of crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (161.7 per 100,000)

$$\begin{aligned}
 \text{Crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals} &= (\text{number of white (non-Hispanic) individuals living with HIV/AIDS} \div \text{population size of white (non-Hispanic) individuals}) \times 100,000 \\
 &= (8,297 / 5,132,633) \times 100,000 \\
 &= (.0001616519) \times 100,000 \\
 &= \mathbf{161.7}
 \end{aligned}$$

However, sometimes, in addition to the population size being different, the age composition of the populations is different. In Massachusetts, black (non-Hispanic) and Hispanic/Latino populations are generally younger than white (non-Hispanic). The median age of black (non-Hispanic) people (29.7 years) and Hispanic/Latino people (24.5 years) is younger than that of white (non-Hispanic) people (38.8 years). Therefore, it is necessary to “age-adjust” the HIV/AIDS prevalence rate to get a true comparison of the impact of the disease across racial/ethnic groups without an effect from the

¹ The denominators for prevalence calculations are based on year 2010 population estimates from the MDPH Bureau of Health Information, Statistics, Research and Evaluation

differences in age composition. Age-adjustment of rates minimizes the distortion created by differences in age composition.

Age-adjusted rates are calculated by weighting the age-specific rates for a given population by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (See example 1.B below).

Example 1.B: Calculation of age-adjusted HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (137.5 per 100,000)

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
<i>Age group (in years)</i>	<i># of prevalent HIV/AIDS cases</i>	<i>Population (2010)</i>	<i>2000 US standard population weight</i>	<i>Age-adjusted rate ((B÷C×D)×100,000)</i>
<1	0	48,010	0.013818	0.00
1-4	0	200,452	0.055317	0.00
5-14	4	571,967	0.145565	0.10
15-24	89	677,899	0.138646	1.82
25-34	500	603,245	0.135573	11.24
35-44	1133	676,064	0.162613	27.25
45-54	3446	841,315	0.134834	55.23
55-64	2393	697,852	0.087247	29.92
65-74	625	403,518	0.066037	10.23
75-84	101	275,380	0.044842	1.64
85+ years	6	136,931	0.015508	0.07
Total	8,297	5,132,633	1.000000	137.5

To see the effect of age-distribution on prevalence rates see Tables 8 and 9 below for a comparison of crude and age-adjusted rates by race/ethnicity.

Table 8. Crude and age-adjusted rates of diagnosis of HIV infection per 100,000 population¹ by race/ethnicity and gender: Average annual rate 2010–2012², Massachusetts³

State total:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic)	5.0	5.1
Black (non-Hispanic)	53.4	52.7
Hispanic/Latino	28.3	29.8
Asian/Pacific Islander	6.1	5.4
Total rate	10.5	10.6
Men:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic) Men	9.1	9.0
Black (non-Hispanic) Men	60.1	59.3
Hispanic/Latino Men	43.1	45.3
Asian/Pacific Islander Men	10.5	9.2
Total rate among men	15.8	15.7
Women:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic) Women	1.3	1.4
Black (non-Hispanic) Women	47.0	46.5
Hispanic/Latina Women	14.1	15.4
Asian/Pacific Islander Women	2.1	1.8
Total rate among women	5.5	5.6

¹ The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

³ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/14

Table 9. Crude and age-adjusted HIV/AIDS prevalence per 100,000 population¹ on December 31, 2013 by race/ethnicity and gender: Massachusetts²

State Total:	Crude rate per 100,000	Age-adjusted rate per 100,000
White, non-Hispanic	161.7	137.5
Black, non-Hispanic	1,383.0	1,416.4
Hispanic/Latino	743.2	959.3
Asian/Pacific Islander	91.8	94.1
Total prevalence	292.7	266.3
Men:	Crude rate per 100,000	Age-adjusted rate per 100,000
White, non-Hispanic	279.4	235.7
Black, non-Hispanic	1,611.9	1,694.7
Hispanic/Latino	1,031.8	1,409.4
Asian/Pacific Islander	147.0	150.8
Total prevalence among men	432.0	389.8
Women:	Crude rate per 100,000	Age-adjusted rate per 100,000
White, non-Hispanic	51.6	45.4
Black, non-Hispanic	1,169.2	1,181.8
Hispanic/Latina	465.0	573.9
Asian/Pacific Islander	41.1	42.5
Total prevalence among women	162.2	151.6
¹ The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/14		

Table 10. People diagnosed with HIV infection within the years 2010–2012¹ by gender and place of birth: Massachusetts²

Race/Ethnicity:	Male		Female	
	N	%	N	%
United States (US)	996	66%	233	41%
Puerto Rico/US Dependency ³	113	8%	33	6%
Non-US	394	26%	296	53%
Total	1,503	100%	562	100%

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14

Table 11. People living with HIV/AIDS on December 31, 2013 by gender and place of birth: Massachusetts¹

Place of Birth:	Male		Female	
	N	%	N	%
United States (US)	9,624	70%	2,898	53%
Puerto Rico/US Dependency ²	1,299	9%	650	12%
Non-US	2,757	20%	1,937	35%
Total	13,680	100%	5,485	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Ninety-eight percent of people living with HIV/AIDS who were born in a US Dependency were born in Puerto Rico, <1% were born in the US Virgin Islands, <1% were born in Guam and 2% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Table 12. Women diagnosed with HIV infection by race/ethnicity¹ and place of birth: Massachusetts², 2010–2012³

	US		Puerto Rico/ US Dependency ⁴		Non-US	
Race/Ethnicity:	N	%	N	%	N	%
White (NH)	97	94%	-- ⁶	1%	5	5%
Black (NH)	85	28%	-- ⁶	<1%	217	72%
Hispanic/Latino	45	33%	31	23%	59	44%
All Women⁵	233	41%	--⁶	6%	296	53%

¹ Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

⁵ Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

⁶ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Table 13. Women diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts¹ 2003–2012²

	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	
2003	130	42%	40	13%	139	45%	309
2004	109	41%	35	13%	125	46%	269
2005	106	44%	24	10%	111	46%	241
2006	112	49%	18	8%	99	43%	229
2007	100	48%	18	9%	90	43%	208
2008	79	40%	25	13%	92	47%	196
2009	71	44%	17	10%	75	46%	163
2010	75	39%	9	5%	107	56%	191
2011	87	45%	11	6%	96	49%	194
2012	71	40%	13	7%	93	53%	177

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

³ Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Table 14. People diagnosed with HIV infection by gender and reported risk: Massachusetts¹, 2010–2012²

Reported risk:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	881	59%	N/A	N/A
Injection drug use (IDU)	106	7%	66	12%
MSM/IDU	63	4%	N/A	N/A
Heterosexual sex	78	5%	150	27%
Other	7	<1%	6	1%
Total undetermined/other	368	24%	340	60%
• Presumed Heterosexual Sex ³	N/A	N/A	255	45%
• Undetermined ⁴	368	24%	85	15%
Total	1,503	100%	562	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

³ Includes female sex with male of unknown HIV status or risk. This category is limited to women.

⁴ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A = Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Note: The category of “presumed heterosexual” is used in Massachusetts to re-assign women who are reported with an exposure of heterosexual sex, but only with a partner of unknown HIV status or behavioral risk. Massachusetts uses the category of presumed heterosexual to distinguish these female cases from other undetermined cases about which we know less. Prior to January 1, 2011, the presumed heterosexual category was also used to report HIV data in men. The rationale for the application of the presumed heterosexual risk category to women only has been addressed in the MDPH OHA report “Intersecting Risks: HIV Infection among Heterosexual Women and Men in Massachusetts.” (2010)

http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting_risks.pdf. Nationally, the Centers for Disease Control and Prevention categorize “presumed heterosexual” cases as “no identified risk” (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the exposure risk was for women in this category. Although a person may not report other risk behaviors, such as injection drug use to a health care provider, it does not exclude the possibility that an individual has experienced these other risks. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.

Table 15. People living with HIV/AIDS on December 31, 2013 by gender and reported risk: Massachusetts¹

Reported risk:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	7,137	52%	N/A	N/A
Injection drug use (IDU)	2,431	18%	1,252	23%
MSM/IDU	661	5%	N/A	N/A
Heterosexual sex	804	6%	1,916	35%
Other	226	2%	181	3%
Total undetermined/other	2,421	18%	2,136	39%
• Presumed heterosexual sex ²	N/A	N/A	1,714	31%
• Undetermined ³	2,421	18%	422	8%
Total	13,680	100%	5,485	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Includes female sex with male of unknown HIV status or risk. This category is limited to women.

³ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Table 16. Women diagnosed with HIV infection by race/ethnicity¹ and reported risk: Massachusetts², 2010–2012³

Reported risk:	White (NH)		Black (NH)		Hispanic/Latina	
	N	%	N	%	N	%
Injection drug use	43	42%	6	2%	17	13%
Heterosexual sex	21	20%	76	25%	46	34%
Total undetermined/other	39	38%	216	71%	71	53%
• Presumed heterosexual sex ⁴	23	22%	174	57%	47	35%
• Undetermined ⁵	16	16%	42	14%	24	18%
Total⁶	103	100%	303	100%	135	100%

¹ Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Includes female sex with male of unknown HIV status or risk. This category is limited to women.

⁵ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

⁶ Totals include pediatric and blood/blood products reported risks.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Table 17. Women living with HIV/AIDS on December 31, 2013 by race/ethnicity¹ and reported risk: Massachusetts²

	White (NH)		Black (NH)		Hispanic/ Latina		API	
Reported risk:	N	%	N	%	N	%	N	%
Injection drug use	590	43%	282	11%	369	25%	-- ⁵	-- ⁵
Heterosexual sex	417	30%	826	33%	629	42%	26	34%
Other	48	4%	76	3%	52	3%	-- ⁵	-- ⁵
Total undetermined/other	315	23%	1,327	53%	436	29%	44	57%
• Pres. HTSX ³	228	17%	1,109	44%	340	23%	27	35%
• Undetermined ⁴	87	6%	218	9%	96	6%	17	22%
Total	1,370	100%	2,511	100%	1,486	100%	77	100%

¹ Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Includes female sex with male of unknown HIV status or risk. This category is limited to women.

⁴ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up, and those with confirmed occupational exposure.

⁵ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic, API = Asian/Pacific Islander, Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

Table 18. People diagnosed with HIV infection by gender and age at HIV diagnosis: Massachusetts¹, 2010–2012²

	Men		Women	
Age (years):	N	%	N	%
Under 13	5	<%	6	1%
13 to 19	35	2%	22	4%
20 to 24	164	11%	42	7%
25 to 29	187	12%	47	8%
30 to 34	175	12%	89	16%
35 to 39	194	13%	84	15%
40 to 44	217	14%	69	12%
45 to 49	225	15%	73	13%
50 to 54	144	10%	50	9%
55 to 59	86	6%	37	7%
60+	71	5%	43	8%
Total	1503	100%	562	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/14

Technical Notes:

Tables 19 includes data reported by Massachusetts residents through anonymous telephone interviews from 2011 to 2012. This ongoing random-digit-dial telephone survey, the Behavioral Risk Factor Surveillance System (BRFSS), covers a broad range of topic areas (including risk related to sexual activity) and is part of a CDC-funded national survey program.

Table 19. Number of sexual partners in the past year¹, female BRFSS respondents ages 18–64 Massachusetts, 2011–2012				
	0 Partners	1 Partner	2+ Partners	N²
Total Women	22.2%	72.3%	5.4%	4,304
Age in Years:	0 Partners	1 Partner	2+ Partners	N
18–24	21.3%	59.8%	18.9%	135
25–34	10.7%	82.3%	7.0%	490
35–44	12.5%	83.4%	4.1%	881
45–64	31.9%	67.3%	0.9%	2,720
Race/Ethnicity:	0 Partners	1 Partner	2+ Partners	N
White (non-Hispanic)	21.2%	73.8%	4.9%	3,396
Black (non-Hispanic)	31.8%	64.7%	3.5%	314
Hispanic/Latino	19.5%	70.7%	9.9%	366
Sex of Partner⁴:	0 Partners	1 Partner	2+ Partners	N
Same sex	Not Applicable	99.3%	0.7%	78
Opposite sex	Not Applicable	93.2%	6.8%	2,905
¹ "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents and represents the number of people a respondent reports having sex with. Sex was defined by the interviewer as including oral, vaginal, or anal sex. ² Only respondents with known values are included in this table. Column sub-totals may not equal overall total due to missing values. ³ Unstable estimates with N < 50 or relative standard error >30% are suppressed ⁴ Only asked of adults reporting sex (including oral, vaginal, or anal sex) in the past year Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2011–2012				

Technical Notes:

Tables 20–22 include data reported by students in randomly selected Massachusetts public high schools every odd year from 1993 to 2013. This anonymous survey, the Youth Risk Behavior Survey (YRBS), is administered by the Massachusetts Department of Elementary and Secondary Education in collaboration with the Centers for Disease Control and Prevention and focuses on risk behaviors that may affect the health and/or safety of high school students.

Table 20. Sexual behavior as reported among female respondents to the Youth Risk Behavior Survey: Massachusetts, 2013

By Behavior:	Percent of total responding yes to specified question	N ¹ (total number of respondents for each question)
Ever had sexual intercourse	36.5%	1259
Sexual intercourse before age 13	1.9%	1257
4 or more lifetime sexual intercourse partners	8.2%	1254
Sexual intercourse in last 3 months	29.0%	1255
Condom used at last intercourse ²	50.8%	341
Alcohol/drugs used at last intercourse ²	18.2%	349
Ever been, gotten someone pregnant	3.1%	1307
Ever had sexual contact against their will	13.3%	1317
¹ The number of respondents for each question varies because some survey participants do not provide an answer		
² Among women reporting sexual intercourse in the past three months		
Data Source: Massachusetts Department of Elementary and Secondary Education		

Table 21. Massachusetts Youth Risk Behavior Survey respondents reporting condom use at last sexual intercourse by year and gender: Massachusetts, 1993–2013¹

Year	Men		Women		Total	
	%	Total N ²	%	Total N ²	%	Total N ²
1993	57.4%	409	46.7%	462	51.8%	872
1995	59.9%	623	52.0%	626	55.9%	1,253
1997	64.2%	517	50.4%	559	57.0%	1,079
1999	62.6%	589	52.0%	639	57.2%	1,237
2001	61.6%	553	54.9%	582	58.1%	1,139
2003	60.3%	424	57.4%	496	57.4%	922
2005	71.6%	442	59.2%	542	65.0%	986
2007	63.2%	422	59.2%	505	61.1%	929
2009	65.7%	409	50.6%	437	57.5%	849
2011	64.5%	373	51.0%	387	57.7%	761
2013	65.2%	323	50.8%	341	57.6%	667

¹ A random sample of high schools is selected for participation each year; data presented do not represent cohorts followed over time

² Total N = total number of respondents by sex (unweighted). The number of respondents for each question varies from year to year

Data Source: Massachusetts Department of Elementary and Secondary Education

Table 22. Massachusetts Youth Risk Behavior Survey respondents reporting sexual intercourse (ever) by year and gender: Massachusetts, 1993–2013¹

Year	Men		Women		Total	
	%	Total N ²	%	Total N ²	%	Total N ²
1993	51.4%	1,326	46.0%	1,435	48.7%	2,763
1995	50.3%	1,870	42.8%	1,930	46.5%	3,806
1997	46.8%	1,800	42.4%	1,858	44.7%	3,664
1999	46.4%	1,922	41.8%	2,017	44.1%	3,954
2001	46.3%	1,886	42.3%	1,892	44.3%	3,786
2003	40.8%	1,581	41.1%	1,676	41.0%	3,261
2005	47.9%	1,512	42.9%	1,669	45.4%	3,185
2007	45.2%	1,344	43.7%	1,495	44.4%	2,844
2009	48.0%	1,225	44.6%	1,251	46.4%	2,480
2011	44.7%	1,228	39.4%	1,281	42.0%	2,513
2013	39.4%	1,251	36.5%	1,259	38.1%	2,516

¹ A random sample of high schools is selected for participation each year; data presented do not represent cohorts followed over time

² Total N = total number of respondents by sex (unweighted). The number of respondents for each question varies from year to year

Data Source: Massachusetts Department of Elementary and Secondary Education

Table 23. Total reported AIDS cases by gender and year of diagnosis: Massachusetts¹, selected years, 1985–2012

Year of diagnosis:	Male		Female		Total
	N	%	N	%	
1985	203	90%	23	10%	226
1990	860	82%	192	18%	1,052
1995	1,009	76%	325	24%	1,334
2000	542	70%	232	30%	774
2003	412	66%	208	34%	620
2004	483	69%	217	31%	700
2005	498	72%	196	28%	694
2006	470	71%	194	29%	664
2007	385	68%	181	32%	566
2008	338	72%	131	28%	469
2009	322	69%	142	31%	464
2010	296	70%	127	30%	423
2011	287	68%	133	32%	420
2012	248	68%	116	32%	364

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/14

Table 24. Deaths among persons reported with HIV/AIDS by gender and year of death: Massachusetts¹, 2003–2012

Year of death	Male		Female		Total
	N	%	N	%	N
2003	257	66%	134	34%	391
2004	257	73%	96	27%	353
2005	233	70%	99	30%	332
2006	232	72%	92	28%	324
2007	201	70%	85	30%	286
2008	205	73%	77	27%	282
2009	196	68%	92	32%	288
2010	183	70%	77	30%	260
2011	153	72%	59	28%	212
2012	139	67%	69	33%	208

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14